

Appl. No. 10/574,134  
Amendment dated June 30, 2009  
Reply to Office Action of April 3, 2009

**REMARKS**

In the April 3, 2009 Office Action, all of the claims stand rejected in view of prior art. No other objections or rejections were made in the Office Action.

***Status of Claims and Amendments***

In response to the Office Action, none of the claims are being amended by the current Amendment. Applicants wish to thank the Examiner for the thorough examination of this application. In summary, claims 3-10 and 12-16 are pending, with claims 3, 4, 10, 12, 13, 14 and 16 being independent claims. Reexamination and reconsideration of the pending claims are respectfully requested in view of the above amendments and the following comments.

***Rejections - 35 U.S.C. § 103***

In paragraph 2 of the Office Action, claims 3-10 and 12-16 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Japan Patent Publication No. H02-286837 (Murata et al.) in view of U.S. Patent No. 6,173,697 (Goto). In response, Applicants traverse the rejection for the following reasons.

Independent claim 3 clearly recites that the throttle aperture is ***maintained*** in the fixed position and is ***increased*** when the fuel injection amount is insufficient. Clearly this arrangement is ***not*** disclosed or suggested by the combination of Murata et al. and Goto. Murata et al.'s control system merely delays ignition for different lengths of time, depending on the angle at which the throttle valve 6 is stuck in an open state (see page 18). Murata et al. ***does not maintain*** the throttle valve in the fixed position, nor does it adjust the throttle valve ***in any way***. Goto fails to cure these deficiencies. Goto only minimizes the opening degree of the throttle valve when it is determined to be stuck (see column 3). In other words, Goto does not ***increase*** the throttle valve aperture at any point. Neither Murata et al. nor Goto even remotely suggests performing such steps. Thus, claim 3's requirements of maintaining

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the throttle valve aperture in the fixed position and of increasing the throttle valve aperture are not met.

Regarding independent claim 4, neither Murata et al. nor Goto discloses or suggests *increasing* an amount of fuel injection when maintaining the throttle valve aperture in the fixed state. These references, in combination, merely teach delaying ignition timing while minimizing the opening degree of the throttle valve when it is determined to be stuck (see page 20 of Murata et al. and column 3 of Goto). Therefore, the limitations of claim 4 are not met by these references.

Regarding independent claim 10, neither Murata et al. nor Goto discloses or suggests maintaining the aperture in the fixed position and *preventing regeneration control* of the diesel particulate filter (DPF). As aforementioned, Murata et al. teaches delaying ignition timing. Goto teaches minimizing the opening degree of the throttle valve when it is determined to be stuck. There is apparently *no mention* in these references of preventing regeneration control of the DPF. This hypothetical combination would thus not reach the structure recited in claim 10.

Regarding independent claim 12, the prior art does not teach or suggest delaying a fuel *injection* to suppress smoke. Goto does not approach the issue. Murata et al. discloses delaying *ignition* on page 20. Delaying ignition is *not* the same as delaying fuel injection. Thus, Murata et al. and Goto, even if viewed together, would not suggest the subject matter of claim 12.

Regarding independent claims 13 and 14, as well as dependent claims 7 and 8, the prior art of record does not appear to divide the fuel into reserve fuel and main fuel. Nor does the prior art appear to delay the fuel injection timing (as required by claim 13), advance the timing of the reserve fuel injection (as required by claims 13 and 7) or reduce the reserve fuel

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injection volume (as required by claims 14 and 8). These limitations are not met by Murata et al. or Goto. Neither reference discusses or so much as *hints* at taking these steps. Thus, the references fail to teach or suggest the subject matter of claims 7, 8, 13 and 14.

Finally, regarding independent claim 16, the prior art of record does not appear to disclose or suggest operatively coupling the control unit to a particle collecting device (DPF). In addition, there is no discussion in the prior art of switching from regeneration control when the throttle valve is stuck. These limitations are *not* met by the combination of Murata et al. and Goto.

Under U.S. patent law, the mere fact that the prior art can be modified does *not* make the modification obvious, unless an *apparent reason* exists based on evidence in the record or scientific reasoning for one of ordinary skill in the art to make the modification. See, KSR Int'l Co. v. Teleflex Inc., 127 S.Ct. 1727, 1741 (2007). The KSR Court noted that obviousness cannot be proven merely by showing that the elements of a claimed device were known in the prior art; it must be shown that those of ordinary skill in the art would have had some “apparent reason to combine the known elements in the fashion claimed.” Id. at 1741. The current record lacks any apparent reason, suggestion or expectation of success for combining the patents to create Applicants’ unique arrangements of a fail-safe control device/method.

Moreover, Applicants believe that dependent claims 5-9 and 15 are also allowable over the prior art of record in that they depend from independent claims 4 and 12, respectively, and therefore are allowable for the reasons stated above. Also, these dependent claims are further allowable because they include additional limitations. Thus, Applicants believe that since the prior art of record does not disclose or suggest the invention as set forth

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in independent claims 4 and 12, the prior art of record also fails to disclose or suggest the inventions as set forth in the dependent claims.

Therefore, Applicants respectfully request that this rejection be withdrawn in view of the above comments.

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In view of the foregoing amendment and comments, Applicants respectfully assert that claims 3-10 and 12-16 are now in condition for allowance. Reexamination and reconsideration of the pending claims are respectfully requested.

Respectfully submitted,

/David L. Tarnoff/  
David L. Tarnoff  
Reg. No. 32,383

GLOBAL IP COUNSELORS, LLP  
1233 Twentieth Street, NW, Suite 700  
Washington, DC 20036  
(202)-293-0444  
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